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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Group Art Unit: To Be Assigned

Jens LERCHL et al.

Examiner: To Be Assigned

U.S. Application No.: 10/502,083✓

U.S. Filing Date: July 22, 2004

PCT Application No.: PCT/EP03/00221

Int'l Filing Date: January 13, 2003

Title: **NOVEL ELONGASE GENE AND METHOD FOR PRODUCING
POLYUNSATURATED FATTY ACIDS**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

THIRD INFORMATION DISCLOSURE STATEMENT

In accordance with 37 C.F.R. §§ 1.97 and 1.98, and in compliance with the duty of disclosure set forth in 37 C.F.R. § 1.56, applicants submit herewith copies of the references listed on the attached Form PTO-1449 for consideration and to be made of record herein by the U.S. Patent and Trademark Office in the above-captioned application.

Attached documents numbered 23, 24, 44, 45 and 46 on the Form PTO 1449 were cited in an International Search Report, mail dated August 4, 2003, of the corresponding International Application No. PCT/EP03/00221, a copy of which is enclosed.

The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 and § 1.98 is not to be construed as a representation that: (i) a complete
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search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

Consideration of the foregoing plus the prompt return of a copy of the enclosed PTO Form-1449 with the Examiner's initials in the left column in accordance with MPEP 609 are respectfully requested.

This Information Disclosure Statement is being submitted before mailing of a first Office Action on the merits; accordingly, no fee is required. However, in the event any fee is deemed necessary, the Commissioner is authorized to charge the undersigned's Deposit Account No. 03-1952.

Respectfully submitted,

MORRISON & FOERSTER LLP

Dated: November 3 , 2004

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Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION <i>(Use several sheets if necessary)</i>	Docket Number 53262-20077.00	Application Number 10/502,083
	Applicant Jens LERCHL et al.	
	Filing Date July 22, 2004	Group Art Unit To be Assigned

U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO

OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
	23.	Abbadi, Amine et al., "Transgenic Oilseeds as Sustainable Source of Nutritionally Relevant C20 and C22 Polyunsaturated Fatty Acids?," <i>Eur. J. Lipid Sci. Technol</i> , 103 :106-113 (2001).
	24.	Certik, Milan et al., "Desaturase-Defective Fungal Mutants: Useful Tools for the Regulation and Overproduction of Polyunsaturated Fatty Acids," <i>Trends in Biotechnology</i> , 16 :500-505 (1998).
	25.	Cronan, John E., Jr. et al., "Biosynthesis of Membrane Lipids," <i>E.coli und Salmonella</i> , AMS Press, Washington, DC; pp 612-636 (1996).
	26.	Frentzen, Margrit, "Acytransferases from Basic Science to Modified Seed Oils," <i>Lipid</i> , 100 (4-5):161-166 (1998).
	27.	Gernardt, Bernt, "Fatty Acid Degradation in Plants, <i>Progress in Lipid Research</i> , 31 (4):417-446 (1992).
	28.	Gühnemann-Schäfer, Kerstin et al., "Fatty Acid β -Oxidation in Glyoxysomes. Characterization of a New Tetrafunctional Protein (MFP III)," <i>Biochimica et Biophysica Acta</i> , 1256 :181-186 (1995).
	29.	Huang, Yung-Sheng et al., "Cloning of $\Delta 12$ - and $\Delta 6$ -Desaturases from <i>Mortierella alpina</i> and Recombinant Production of γ -Linolenic Acid in <i>Saccharomyces cerevisiae</i> ," <i>Lipids</i> , 34 (7):649-659 (1999).
	30.	Kinney, Anthony J., "Genetic Engineering of Oilseeds for Desired Traits," <i>Genetic Engineering</i> , 19 :149-166 (1997).
	31.	Kunau, Wolf-H et al., " β -Oxidation of Fatty Acids in Mitochondria, Peroxisomes, and Bacteria: A Century of Continued Progress," <i>Progress in Lipid Research</i> , 34 (4):267-342 (1995).
	32.	Magnuson, Kelly et al., "Regulation of Fatty Acid Biosynthesis in <i>Escherichia coli</i> ," <i>Microbiological Reviews</i> , 57 (3):522-542 (1993).

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION <i>(Use several sheets if necessary)</i>		Docket Number 53262-20077.00	Application Number 10/502,083
		Applicant <div style="text-align: center;">Jens LERCHL et al.</div>	
		Filing Date July 22, 2004	Group Art Unit To be Assigned
	33.	Murphy, Denis J. et al., "Biosynthesis, Targeting and Processing of Oleosin-Like Proteins, which are Major Pollen Coat Components in <i>Brassica napus</i> ," <i>The Plant Journal</i> , 13 (1):1-16 (1998).	
	34.	Napier, Johnathan A. et al., "Identification of a <i>Caenorhabditis elegans</i> Δ^6 -Fatty-Acid-Desaturase by Heterologous Expression in <i>Saccharomyces cerevisiae</i> ," <i>Biochemical Journal</i> , 330 :611-614 (1998).	
	35.	Ohlrogge, John et al., "Lipid Biosynthesis," <i>The Plant Cell</i> , 7 :957-970 (1995).	
	36.	Shanklin, John et al., "Desaturation and Related Modifications of Fatty Acids," <i>Annual Review of Plant Physiology and Plant Molecular Biology</i> , 49 :611-641 (1998).	
	37.	Simopoulos, Artemis P., "Essential Fatty Acids in Health and Chronic Disease," <i>The American Journal of Clinical Nutrition</i> , 70 (supp):560S-569S (1999).	
	38.	Stukey, Joseph E. et al., "The <i>OLE1</i> Gene of <i>Saccharomyces cerevisiae</i> Encodes the Δ^9 Fatty Acid Desaturase and Can be Functionally Replaced by the Rat Stearoyl-CoA Desaturase Gene," <i>The Journal of Biological Chemistry</i> , 265 (33):20144-20149 (1990).	
	39.	Stymne, Sten, "Biosynthesis of 'Uncommon' Fatty Acids and Their Incorporation into Triacylglycerols," <i>Biochemistry and Molecular Biology of Membrane and Storage Lipids of Plants</i> , N. Murata and Somerville eds., American Society of Plant Physiologists, pp150-158 (1993).	
	40.	Takahata, Kyoya et al., "The Benefits and Risks of n-3 Polyunsaturated Fatty Acids," <i>Bioscience, Biotechnology, and Biochemistry</i> , 62 (11):2079-2085 (1998).	
	41.	Voelker, Toni, "Plant Acyl-ACP Thioesterases: Chain-Length Determining Enzymes in Plant Fatty Acid Biosynthesis," <i>Genetic Engineering</i> , 18 :111-113 (1996).	
	42.	Wada, Hajime et al., "Enhancement of Chilling Tolerance of a Cyanobacterium by Genetic Manipulation of Fatty Acid Desaturation," <i>Nature</i> , 347 :200-203 (1990).	
	43.	Wang, Xuemin M. et al., "Biosynthesis and Regulation of Linolenic Acid in Higher Plants," <i>Plant Physiology and Biochemistry</i> , 26 (6):777-792 (1988).	
	44.	DATABASE Accession No. DC257414, May 24, 2003.	
	45.	DATABASE Accession No. BE775687, May 29, 2003.	
	46.	Kamoun, Sophien, et al., "Initial Assessment of Gene Diversity for the Oomycete Pathogen <i>Phytophthora infestans</i> Based on Expressed Sequences," <i>Fungal Genetics and Biology</i> , 28 :94-107 (1999).	
	47.	Willich, S.N., et al., "Omega-3 Fatty Acids (Fish Oil) in their Clinical Application," <i>Deutsche Medizinische Wochenschrift</i> , 120 (7):227-233 (1995). Note: No English Abstract Available.	
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